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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Mark J. Karol

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EXAMINER

MOORE JR, MICHAEL J

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/601,229	Applicant(s) KAROL ET AL.	
	Examiner MICHAEL J. MOORE JR	Art Unit 2619	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12 and 24 is/are allowed.
- 6) ☒ Claim(s) 1,8-10,13 and 22 is/are rejected.
- 7) ☒ Claim(s) 2-7,11,14-21 and 23 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

The Amendment made by Applicant to the specification to obviate the objection made in the previous Office Action is proper and has been entered. This objection has been withdrawn.

Claim Rejections - 35 USC § 112

Amendments made by Applicant to claims **1-9 and 13-21** to obviate the rejections made under 35 U.S.C. 112, 2nd paragraph presented in the previous Office Action are proper and have been entered. These particular rejections have been withdrawn.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims **1, 8-10, 13, and 22** are rejected under 35 U.S.C. 102(e) as being anticipated by Gregson (U.S. 7,072,305). *Gregson* teaches all of the limitations of the specified claims with the reasoning that follows.

Regarding claim **1**, “a method for detecting a potential problem in the transmission of a sequence of packets via an Internet Protocol (IP) network, the

transmission occurring from a signal origin point to a signal destination point” is anticipated by the network monitoring and analysis between customer equipment 150, 160 (signal origin and destination points) via analyzers 110, 120, 140 of Figure 1 as spoken of on column 4, lines 26-35.

“Examining an original packet sequence to be sent from the origin point, the original packet sequence comprising periods of silence between packets to be transmitted, to determine one or more extended silence periods wherein the extended silence period exceeds a predetermined time duration” is anticipated by analyzer unit 110 of Figure 1 that detects (examining) the beginning and termination of silent period 510 (in Figure 5) of the data stream as spoken of on column 8, lines 30-34.

“Introducing a keep-alive signal packet into each of the extended silence periods thereby converting the original packet sequence into a modified packet sequence” is anticipated by the injection of testing traffic (keep-alive signal) into the silent periods of the data stream as spoken of on column 8, lines 35-38.

Lastly, “transmitting the modified packet sequence over the IP network; and detecting whenever at least one packet of the modified packet sequence has not been received at the signal destination point during a specified time interval” is anticipated by the measurement of the packet loss (packet of sequence not received) over an interval of time at a particular network location by the network administrator to detect a potential network problem as spoken of on column 5, lines 36-40, as well as column 8, lines 14-19.

Regarding claim **8**, “wherein the IP network is administered by a network manager, and the method further comprises the step of notifying the network manager of the potential problem” is anticipated by the reporting (notifying) of collected packet loss data from analyzer unit 140 to network operation center 130 (network manager) of Figure 1 as spoken of on column 6, lines 13-15.

Regarding claim **9**, “wherein a plurality of transmissions of sequences of packets is sent via an identifiable routing path over the IP network, the routing path comprising multiple IP network components” is anticipated by the route shown between customer equipment 150, 160 over the Internet via analyzer units 110, 120 (components) as shown in Figure 1, as well as the service provider administrator accessing, monitoring, and analyzing the network performance via the Internet as spoken of on column 4, lines 26-29.

Regarding claim **10**, “a method for detecting a potential problem in the transmission of a sequence of packets via an Internet Protocol (IP) network, the transmission occurring from a signal origin point to a signal destination point” is anticipated by the network monitoring and analysis between customer equipment 150, 160 (signal origin and destination points) via analyzers 110, 120, 140 of Figure 1 as spoken of on column 4, lines 26-35.

“Introducing, at a fixed period, a keep-alive signal packet into an original packet sequence, thereby converting the original packet sequence into a modified packet sequence” is anticipated by the injection of testing traffic (keep-alive signal) into the silent periods of the data stream as spoken of on column 8, lines 35-38.

Lastly, “transmitting the modified packet sequence over the IP network; and detecting whenever at least one packet of the modified packet sequence has not been received at the signal destination-point during a specified time interval” is anticipated by the measurement of the packet loss (packet of sequence not received) over an interval of time at a particular network location by the network administrator to detect a potential network problem as spoken of on column 5, lines 36-40, as well as column 8, lines 14-19.

Regarding claim **13**, “a system for detecting a potential problem in the transmission of a sequence of packets via an Internet Protocol (IP) network, the transmission occurring from a signal origin point to a signal destination point” is anticipated by the network monitoring and analysis between customer equipment 150, 160 (signal origin and destination points) via analyzers 110, 120, 140 (system) of Figure 1 as spoken of on column 4, lines 26-35.

“Means for examining an original packet sequence to be sent from the origin point, the original packet sequence comprising periods of silence between packets to be transmitted, to determine one or more extended silence periods wherein the extended silence period exceeds a predetermined time duration” is anticipated by analyzer unit 110 (means) of Figure 1 that detects (examining) the beginning and termination of silent period 510 (in Figure 5) of the data stream as spoken of on column 8, lines 30-34.

“Means for introducing a keep-alive signal packet into each of the extended silence periods thereby converting the original packet sequence into a modified packet

sequence” the injection of testing traffic (keep-alive signal) into the silent periods of the data stream by analyzer unit 110 (means) as spoken of on column 8, lines 35-38.

“Means for transmitting the modified packet sequence over the IP network” is anticipated by the injecting of traffic over the link by analyzer unit 110 as spoken of on column 8, lines 44-46.

Lastly, “means for detecting whenever at least one packet of the modified packet sequence has not been received at the signal destination point during a specified time interval” is anticipated by the measurement of the packet loss (packet of sequence not received) over an interval of time at a particular network location by the network administrator (means) to detect a potential network problem as spoken of on column 5, lines 36-40, as well as column 8, lines 14-19.

Regarding claim **22**, “a system for detecting a potential problem in the transmission of a sequence of packets via an Internet Protocol (IP) network, the transmission occurring from a signal origin point to a signal destination point” is anticipated by the network monitoring and analysis between customer equipment 150, 160 (signal origin and destination points) via analyzers 110, 120, 140 (system) of Figure 1 as spoken of on column 4, lines 26-35.

“Means for introducing, at a fixed period, a keep-alive signal packet into an original packet sequence, thereby converting the original packet sequence into a modified packet sequence” is anticipated by the injection of testing traffic (keep-alive signal) into the silent periods of the data stream by analyzer unit 110 (means) as spoken of on column 8, lines 35-38.

“Means for transmitting the modified packet sequence over the IP network” is anticipated by the injecting of traffic over the link by analyzer unit 110 as spoken of on column 8, lines 44-46.

Lastly, “means for detecting whenever at least one packet of the modified packet sequence has not been received at the signal destination point during a specified time interval” is anticipated by the measurement of the packet loss (packet of sequence not received) over an interval of time at a particular network location by the network administrator (means) to detect a potential network problem as spoken of on column 5, lines 36-40, as well as column 8, lines 14-19.

Allowable Subject Matter

3. Claims **12 and 24** are allowed.
4. Claims **2-7, 11, 14-21, and 23** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
5. The following is a statement of reasons for the indication of allowable subject matter:

Regarding claims **2-7, 11, 12, 14-21, 23, and 24**, these claims are allowable for the reasons indicated in the previous Office Action.

Response to Arguments

6. Applicant's arguments filed 1/23/08 have been fully considered but they are not persuasive.

Regarding *amended* claims **1 and 13**, Applicant argues that *Gregson* does not teach determining “one or more extended silence periods wherein the extended silence period exceeds a predetermined time duration”, and rather teaches the injection of data indiscriminately within any silent period.

However, there is no further explanation in the claim language of how this “predetermined time duration” is defined, other than that it indicates an extended silence period. Giving a broadest reasonable interpretation, it may be interpreted that all silence periods may constitute extended silence periods, if they exist for an amount of time (predetermined time duration) such that data may be injected.

Using this reasoning, it is held that the detection of the silent periods of a data stream in *Gregson* teaches the above limitation in question as described above.

Regarding claims **1, 10, 13, and 22**, Applicant argues that *Gregson* does not teach the introduction of “a keep-alive signal packet” into a silence period of a packet sequence. Applicant also argues that *Gregson*’s purpose for injecting data into the silent period is to actually send the data, not to keep a communication link “alive” or active.

However, while Examiner found particular sections of the specification where a “keep-alive signal” and “keep-alive function” is referred to, Examiner was unable to find a clear definition in the specification of the above argued purpose of the “keep-alive” signal. Examiner was only able to find sections in the specification stating the injection of RTCP packets in silent periods when the number of RTP packets decreases.

Further, Applicant argues that the injected data of *Gregson* merely fills in the gaps created by the silent periods, but would otherwise have no effect on the communication link.

However, it is held that the traffic injection of *Gregson* does have an effect on the communication link, as it allows the measurement of the packet loss over an interval of time at a particular network location by the network administrator to detect a potential network problem as spoken of on column 5, lines 36-40, as well as column 8, lines 14-19.

Therefore, as there is no further explanation of the "keep-alive signal" in the claim language or the specification, it is held that the data injected in silent periods of *Gregson* may be interpreted to be a "keep-alive signal", as this data allows a data packet analyzer to monitor various network parameters (packet loss, latency, etc.) of a communications link.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Brewer et al. (U.S. 6,876,657) is another reference considered pertinent to this application.

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL J. MOORE, JR., whose telephone number is (571)272-3168. The examiner can normally be reached on Monday-Friday (7:30am - 4:00pm). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wing F. Chan can be reached at (571) 272-7493. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Wing F. Chan/
Supervisory Patent Examiner, Art Unit 2619
4/14/08

/M. J. M./
Examiner, Art Unit 2619